



Technical Bulletin #3 NATIONAL SLATE ASSOCIATION

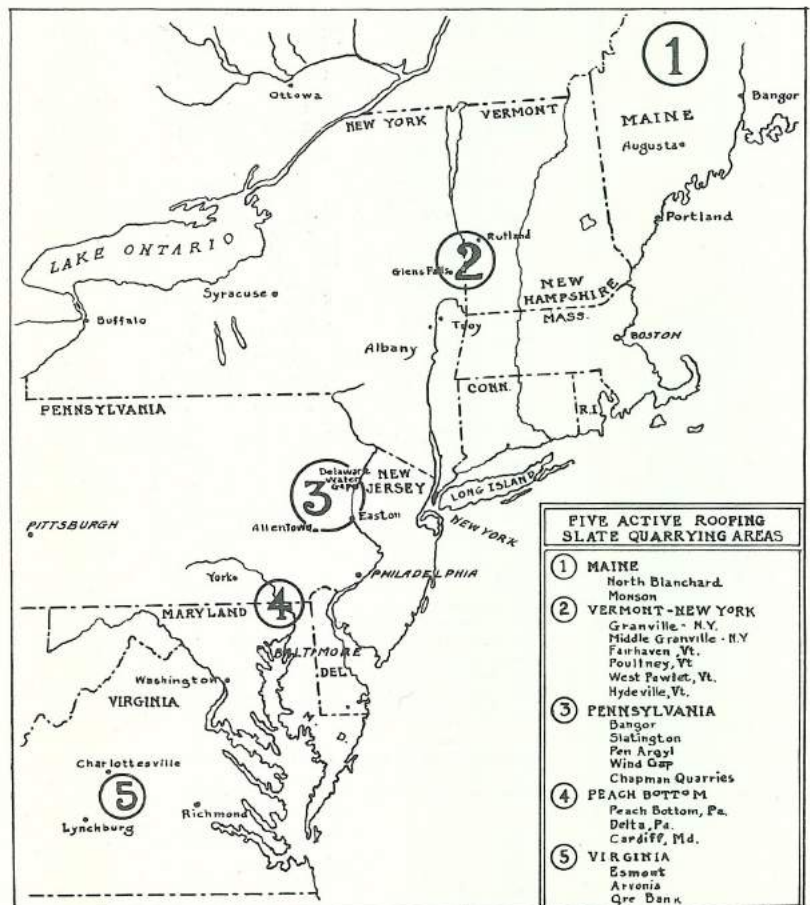
Technical Bulletin No. 3: Lesser Known Slate Deposits of the United States

From its very beginnings to the present, the principal commercial slate deposits of the United States have been located along the Appalachian Mountain chain.

These included the Hard- and Soft-Vein districts of Lehigh and Northampton counties, Pennsylvania; the Vermont-New York district, including Rutland County, Vermont and Washington County, New York; the Monson district, Piscataquis County, Maine; the Peach Bottom district, York County, Pennsylvania and Harford County, Maryland; and the Arvonias district in Buckingham County, Virginia (Figure 1)¹.

Between 1879 and 1957, quarries in the principal commercial slate deposit regions produced 83.5 percent of total U.S. output (roofing and structural slate). What is less well known is where the other 16.5% of U.S. slate production came from. There were a handful of other districts, primarily in the Southeast, in New Jersey, and in the Rocky Mountains, that were active for short periods of time in the late nineteenth and early twentieth centuries, when slate production was at its peak. These deposits tended to be worked

sporadically, opening when demand for slate surged (and prices were high), only to be abandoned when demand slackened. Full commercial development of these quarries



¹For more information on these slate-producing regions, see NSA's *Slate Roofs: Design and Installation Manual*, 2010 Edition, pages 7-10, available at www.slateassociation.org.

Figure 1: Active commercial slate quarrying regions c.1926. Source: *Slate Roofs*. New York: National Slate Association, 1926, p. 84.



NOVEMBER 2017

was generally hindered by their remoteness from major population centers, lack of easy access to railroads for efficient transportation to markets, and/or product that was metamorphosed to a somewhat lower-grade than that being quarried by the major commercial producers.

Minor Eastern deposits occur in Arkansas, Georgia, Tennessee, New Jersey, Michigan, and Massachusetts. The productive slate region of Arkansas was located in the Ouachita Mountains in a belt about 100 miles long lying west of Little Rock, in Polk and Montgomery counties. The Arkansas deposits contained slates similar in color to those of the Vermont-New York district as well as black slates. Roofing slate was produced in the region only between 1889 and 1905 and, perhaps, briefly again in 1932. Total production was about 2,538 squares.

In northwestern Georgia, quarries were opened in Polk, Bartow, and Gordon counties, most notably at Rockmart, Cedartown, Cartersville, and Fairmount. As many as four quarries in the district produced about 38,097 squares of roofing slate between 1880 and 1906. Production continued between 1909 and at least 1913, but on such a small scale that the state's output was combined with other states by the U.S. Geological Survey rather than recorded separately. The Rockmart/Cedartown slate ranged in color from black to dark bluish-gray, while that of Fairmont/Cartersville consisted chiefly of light bluish-green gray colored slate with a slightly lustrous surface.

The slate deposits of east Tennessee are located in a 30-mile long belt along the Tennessee-North Carolina border, stretching from the Georgia state line to the French Broad River, east of the town of Newport. The most successful operations were located in the Unicoi Mountains (also part of the Appalachian Mountain range), near Tellico Plains, Monroe County, the terminus of a branch of the Louisville & Nashville Railroad. The blue-gray and purple slates were used in nearby markets, primarily Chattanooga and, to a lesser extent, Maryville and Knoxville. The Tennessee quarries produced approximately 375 squares of roofing slate on-and-off between 1896 and 1904 and a small, un-recorded, amount in 1910.

The slate deposits of New Jersey occur in the Kittatinny Mountains (part of the Appalachian Mountain range), in

Sussex County, and represent an extension of the Hard-Vein slates of Pennsylvania. The slate does bear a strong resemblance to that of Chapman Quarry's, Pennsylvania, being gray in color with distinct ribbons that weather to a variety of colors ranging from orange to tan to dark brown (Figure 2). Quarries were worked at Newton and Lafayette. Between 1880 and 1930, they produced approximately 59,495 squares of roofing slate. Today, the slate can be seen in the Andover Slate Cut, a 500-foot long channel cut through solid stone along a railroad bed that has been converted to a recreational trail in Kittatinny Valley State Park.

The slate deposits of Michigan were located near Arvon and Skanee, Baraga County, on the northwestern side of



Figure 2: Slate in the Andover Slate Cut, Kittatinny Valley State Park, Sussex County, New Jersey.

the Huron Mountain Range. A tramway was built from the quarries to Huron Bay for shipping. Prior to 1878, 6,535 squares of black roofing slate were produced. After an idle period, approximately 48,000 squares of roofing slate came to market under new management between 1883 and 1888. Slate of lesser quality may also have been located at Houghton, Marquette, and Menominee, also in the Upper Peninsula.

Massachusetts produced about 3,050 squares of roofing slate between 1880 and 1882, most likely at Lancaster, Worcester County. The quarry, opened by a Mr. Flagg, may have produced roofing slate as early as the 1750s before going idle. Lesser quality slate may also have been produced during the eighteenth century in eastern Massachusetts,



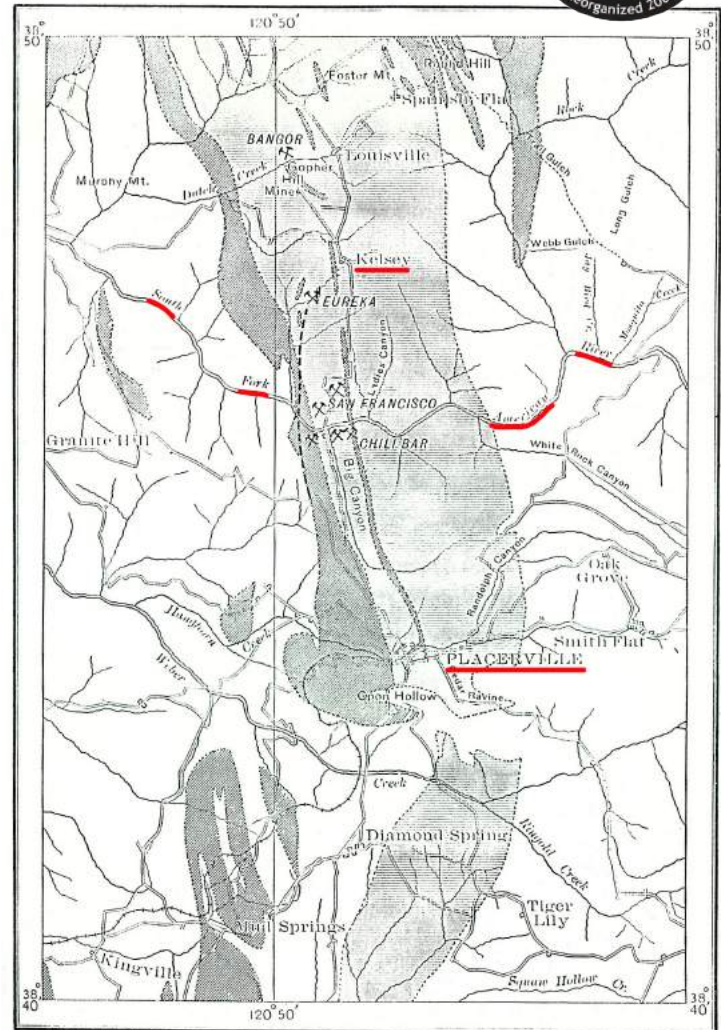
NOVEMBER 2017

Figure 3: Geologic map of the Placerville slate district, California. Kelsey, Placerville, and South Fork American River are highlighted. The key at the bottom reads, from left to right, "Mariposa slates," "Basic Igneous rocks," "Slate quarries," and "Line of cable." Source: Dale, T. Nelson, *Slate in the United States*, Bulletin 586, Washington, D.C.: United States Geological Survey, 1914, Plate X, p. 67.

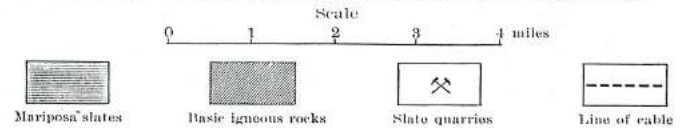
along the Neponset River, near Quincy and Milton.

In the western United States, slate deposits have been quarried in several locations, most notably in northern California, central Colorado, and in Slate Canyon, near Provo, Utah. In California, a dense, hard, black colored slate was worked in El Dorado County, roughly 15 miles east of Sacramento, near Placerville along the South Fork of the American River (Figure 3). Between 1889 and 1909, a handful of quarries in California produced approximately 77,433 squares of roofing slate. Frequent pyrite nodules and ribbons interfered with the development of the California quarries. In Colorado, a deposit of black slate located along the Crystal River, at Marble, Gunnison County, was worked by the Colorado Slate Company starting in 1910. The quarries of Utah were active between 1888 and 1904 and likely produced only about 350 squares of roofing slate.

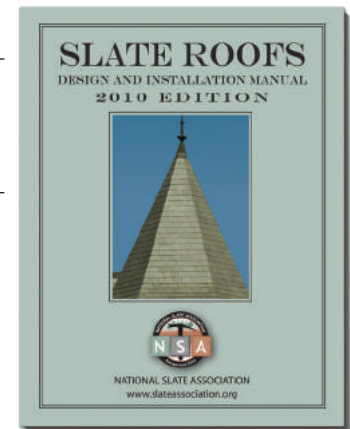
In addition to the above, lesser, non-commercial, slate deposits include those of Humboldt County, Nevada, the Phoenix Mountains just north of Phoenix, Arizona, eastern Minnesota, along the St. Louis River in Jay Cooke State Park, and Martinsburg, West Virginia. Very small slate deposits are reported to also occur near Hanover and Lebanon, New Hampshire as well as further north, near Littleton, New Hampshire; on Slate Creek in South Dakota, southeast of Black Hills National Forest; and, in Llano and Presidio Counties, Texas.



GEOLOGIC MAP OF PLACERVILLE SLATE DISTRICT, CALIFORNIA.



For more information on commercial slate deposits of North America, including those of Canada, please see *Slate Roofs: Design and Installation Manual, 2010 Edition*, available at www.slateassociation.org



For more information about The National Slate Association, visit www.slateassociation.org

© Copyright: 2017, National Slate Association

Installation Standards Committee: Jeff Levine (Editor), Alan Buohl, Remo Capolino, Dan Cornwell, Dave Large, Russel Watsky.

Published by the National Slate Association